

LIPSON, M. A.

LIPSON, M. A. --"Calculations of Interchamber Pillars and Blocks in Working of Potassium Deposits." (Dissertations For Degrees In Science and Engineering Defended at USSR Higher Educational Institutions) (29) Min Chemical Industry USSR, Main Administration of Mineral Chemical Industry, State Sci Res Inst of Mineral Chemical Raw Materials GIGKhS, Moscow, 1955

SO: Knizhnaya Letopis' No 29, 16 July 1955

* For the Degree of Candidate in Technical Sciences

LIPSON, M.A. (Moskva)

Graphic method for determining the supporting capacity of ore blocks.

Izv.AN SSSR.Otd.tekh.nauk no.5:131-136 My '56.

(MLBA 9:8)

(Mine timbering) (Mining engineering)

LIPSON, M.A.

Problems in the Exploitation (~~Contr~~) 879
of Mineral Ore Deposits, Moscow, Izd-vo AN SSSR, 1958, 251pp.

Skochinskiy. There are 5 figures and 12 Soviet references.

Kovazhenkov, A.V., Candidate of Technical Sciences (Deceased), and
Barsukov, F.A., Mining Engineer. Breaking and Coarse-Crushing Rocks
by Blasting 23

This is an evaluation of the main factors affecting the type of
blastings in ore-crushing processes. Patterns of single and
group shooting are discussed and a classification of ore ma-
terials is presented. The text is accompanied by 8 diagrams
and 9 graphs. There are no references.

Lipson, M.A., Candidate of Technical Sciences. Design of Permanent
Pillars (The Use of Graphic Methods in Solving Problems in Rock-pres-
sure Theory 33

The author recommends the replacement of empirical, often erron-
eous, formulas by graphic-analytical methods based on well-known
theories of rock pressure. Such a method was developed by S.S.
Golushkevich with reference to statically determined masses. A practical case
is considered to illustrate the hiatus between empirical formulas and well-devel-
oped theories.

127-58-1-26/28

AUTHORS: Lipson, M.A. and Kravchenko, I.V., Candidates of Technical Sciences, and Liberman, Yu.M., Engineer-Physicist

TITLE: On the Article by V.N. Maslenikov "On the Dependence of the Shape and Size of Samples on the Mechanical Properties of Rocks" (Na stat'yu V.N. Masenikova "O zavisimosti mekhanicheskikh svoystv gornykh porod ot formy i razmerov obraztsov")

PERIODICAL: Gornyy Zhurnal, 1958, Nr 1, pp 76-77 (USSR)

ABSTRACT: This article is a critical review of the Maslenikov article published in Gornyy Zhurnal, 1956, Nr 12. The reviewers conclude that Maslenikov's article does not contain any recommendations on the choice of sample sizes for tests. The article under review contains numerous inaccuracies and false assertions, and introduces only confusion in the solution of the problem in question. There is one Soviet reference.

AVAILABLE: Library of Congress

Card 1/1 1. Rock-Properties 2. Rock-Test methods

SOV-127-58-3-11/24

AUTHOR: Lipson, M.A., Candidate of Technical Sciences

TITLE: Resistance Capacity of Belt-Like and Cylindrical Pillars
(O nesushohey sposobnosti lentochnykh i tsilindricheskikh
tselikov)

PERIODICAL: Gornyy zhurnal, 1958, Nr 3, pp 50-57 (USSR)

ABSTRACT: The author presents a graphic solution of the problem of maximal state of equilibrium of pillars. The analytical calculation of the problem was proposed by Academician L.D. Shervakov [ref. 2] A.A. Vopilkin, G.I. Shirko, K.V. Ruppeneyt, S.S. Golushkevich. O. More [ref. 3,4,5], but some of the values were only approximate, and the graphic solution proposed by the author is proved by an analytical example. There are 9 graphs, 1 figure, 3 tables and 10 Soviet references.

1. Beams---Properties
2. Beams---Mathematical analysis

Card 1/1

LIPSON, M.A. (Moskva)

Graphic solution of rupture problems with a variable field of
stresses. Inzh.zhur.2 no.1:138-148 '62. (MIRA 15:3)
(Strength of materials)

LIPSON, M.A., kand.tekhn.nauk

Improving the cutter in rotary drilling at limestone quarries.

Sbor. trud. NII Zhelezobetona no.7:44-53 '62.

(MIRA 16:1)

(Drilling and boring machinery) (Limestone)

LIPSON, M.A. (Moskva)

Theory of the strength of plane-strained bodies. Inzh. zh. 3
no.1:186-194 '63. (MIRA 20:10)

(Strength of materials)

SHLADIN, I.B., kand. tekhn. nauk; BUYANOV, Yu.D., kand. tekhn. nauk;
LIFSON, M.A., kand. tekhn. nauk; NISNEVICH, M.L., kand. tekhn.
nauk; RODIN, R.A., kand. tekhn. nauk

Extensive introduction of the results of scientific research
offers great possibilities to enterprises. Stroi. mat. 10
no.9:18-20 S '64 (MIRA 18:2)

LIPSON, Yu. P.

Treatment of chronic highmoritis with iodolipol. Vest. otorin.
no.2:83-86 '62. (MIRA 15:2)

1. Iz kafedry bolezney ukha, gorla i nosa (zav. - prof. I. M.
Burakov) Astrakhanskogo gosudarstvennogo med'tsinskogo instituta.

(CONTRAST MEDIA) (MAXILLARY SINUS—DISEASES)

LIPSON, Yu.P.

State of skin capillaries in some otorhinolaryngological diseases.
Zhur.ush., nos. i gor. bol. 22 no. 6: 19-23 N-D'62. (MIRA 16:7)

1. Iz Privolzhskoy rayonnoy bol'nitsy Astakhanskoy oblasti (nauchnyy rukovoditel' - zav. kafedroy bolezney ukha, gorla i nosa Astrakhanskogo meditsinskogo instituta prof. I.M. Burakov).
(OTORHINOLARYNGOLOGY) (CAPILLARIES—PERMEABILITY)

LIPSYNSKI, STEFAN

Poland /Chemical Technology. Chemical Products
and Their Application

I-15

Treatment of solid mineral fuels

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31827

Author : Lipszynski Stefan

Title : Ways of Increasing the Benzene Output of Coking
Plants

Orig Pub: Koks, smola, gaz, 1956, 1, No 3, 90-92

Abstract: The possibilities are considered of increasing
the benzene output of Polish coking plants,
essentially in two ways: 1) by intensifying the
process of coke gas cooling (and if difficulties
are encountered -- by increasing the amount of
absorbent oil utilized in the benzene scrubbers)
and benzene recovery from the oil absorbate;

Card 1/2

Poland /Chemical Technology. Chemical Products
and Their Application

I-15

Treatment of solid mineral fuels

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31827

2) by increasing the benzene concentration in the coke gas; it is noted that the last mentioned measure can be effected by regulating the coking process (by adjusting the degree of comminution of the batch, more uniform heating of the furnace chamber walls, etc), and to a still greater extent by introducing into the upper portion of the furnace chamber petroleum residues, especially residues that are rich in paraffins.

Card 2/2

LIPTAK, Andras; MOLNAR, Zoltan, dr.

Heat loss determination of electrically heated radiant screens,
Epuletgepeszet 13 no.6:216-222 D '64. (MIRA 17:12)

1. Post, Radio and Television Technical Directorate, Budapest
(for Liptak). 2. Chair of Domestic Engineering of the Budapest
Technical University (for Molnar).

LIPTAK, Ferenc, dr., okleveles mernok, adjunktus

Spray distribution of sprinkler irrigation in case of different nozzle patterns. Vizugyi kozl no.3:369-403 '62.

1. Epitoipari es Koslekedesi Muszaki Egyetem I.sz.Viz-
epitestani Tanszeke.

FEKETE, Andras; LIPTAK, Ferenc

Laboratory testing of mantle-type water distributions. Hidrologiai
közlemény 41 no.1:4-16 F '61.

1. Építőipari és Kőszelkedési Műszaki Egyetem I.sz. Vízépítési
Tanszéke, Budapest.

BALOGH, Janos, dr.; LIPTAK, Ferenc

Determination of the size of the area which can be irrigated by portable sprinklers. Hidrológiai Közlemény 42 no.1:33-36 F '62.

1. Országos Vizügyi Felügyelőség, Budapest (for Balogh). 2. Építőipari és Közlekedési Műszaki Egyetem I.sz. Vízépítési Tanszék, Budapest (for Liptak).

LIPTAK, Ferenc

Irrigation farming systems in Bulgaria. Hidrológiai közlemény 42
nr.3:267-271 J1 '62.

1. Építőipari és Közlekedési Műszaki Egyetem I.sz. Vízépítészeti
Tanszéke.

LIPTAK, Ferenc, dr., mernok, adjunktus; OLLOS, Geza, dr., a muszaki tudomanyok kandidatusa, docens

Seepage from covered and insulated irrigation canals. Vizugyi kozl no.4:549-574 '64.

1. Chair of Water Resources Development of the Technical University of Building and Transportation, Budapest.

LIFTAK, Ferenc, dr.

Sediment feeding installations. Hidrologiai kozlony 44 no.12:569-572
D '64.

1. Chair of Water Resources Development, Technical University of
Building and Transportation, Budapest.

Liptak, F.

68. Influence of the variation of temperature and of discharge on the flow pattern in settling tanks with longitudinal direction of flow, F. Liptak, *Hydrogigrafiya*, Vol. 35, 1955, No. 7-8, pp. 272-277, 18 figs, 3 tabs.

Caaply

After determining the optimum design of the water distribution setup, it is advisable to investigate the development of the flow pattern in case of variation of the temperature difference between water contained in the tank and the inflow furthermore in case of the fluctuation of throughput. The development of the flow pattern was substantially affected already by a temperature difference of 3 to 4° C. An equalization of temperatures occurs very slowly particularly when warmer water is let into colder water. Substantial differences of temperature may occur in settling tanks during service if the water inflow is through closed pipes less exposed to ambient air temperature and to insulation than in outdoor settling tanks. In case of an increase of the throughput the percentual difference between maximum and mean velocity decreases.

LIPTAK, F.

LIPTAK, F. - Consideration of the operation problem in planning a large-scale irrigation systems. p. 207, Vol. (37), no 3/4, 1955
VIZUGYI KOZLEMENYEK. HYDRAULIC ENGINEERING. (Kozlekedesugyi
miniszterium. Vizgazdalkodasi Tudomanyos Kutato Intezet)
Budapest.

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4--April

LIPTAK, FRANTISEK.

Zaklady organizacie a planovania chemickych podnikov. Kapitulu o vyrobnej kapacite a jej vyuziti v podnikoch chemickeho priemyslu napisal Ivan Durkovic. (Vyd.1.) B Bratislave, Slovenska vysoka skola technicka, 1956. 445 p. (Docasne vysokoskolske ucebnico, zv. 119) (Foundations of the organization and planning of chemical enterprises.)

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) IC, VOL. 7, NO. 1, JAN. 1958

LIPTAK, F.

The method of bilateral observation and its application to machine production. p.174.
(Technika Praca. Bratislava. Vol. 9, no. 3, Mar. 1957.)

SO: Monthly List of East European Accessions (EEAL) LC., Vol. 6, no. 7, July 1957. Uncl.

LIPTAK, F.

"A meeting."

KRASY SLOVENSKA. (Poverenictvo dopravy. Riaditelstvo pre cestovny ruch)
Bratislava, Czechoslovakia, Vol. 36, No. 5, May 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.

LIPTAK, F.

"The Kozi kamen peak."

KRASY SLOVENSKA. (Poverenictvo dopravy. Riaditelstvo pre cestovny ruch)
Bratislava, Czechoslovakia, Vol. 36, No. 5, May 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.

LIPTAK, F.

Operation of dual siphons. p. 31.

HIDROLOGIAI KOZLONY. HYDROLOGICAL JOURNAL. (Magyar Hidrologiai Tarsasag)
Budapest, Hungary. Vol. 39, no. 1, Jan. 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, no. 7, July 1959
uncla.

LIPTAK, Frantisek, inz., C.Sc.

The method of double control. Prace mzda 10 no.8:362-366
Ag '62.

LIPTAK, Frantisek, inz., C.Sc.

Establishment of national standards and work indexes in the
chemical industry and some other problems. Prace mada 10
no.11:503-506 N '62.

LIPTAK, František, inz., ScC.

Use of multiment measurement in examining work in storage.
Prace mzda 11 no.5:225-230 My '63.

1. Gumarne 1. maja, n.p., Puchov.

LIPTAK, Frantisek, inz., CSc.

Is the present method of discovering labor productivity reserve
in the chemical industry expedient? Tech praca 15 no.7:547-
548 JI '63.

1. Predseda odborovej normavacej komisie guma-plastika.

LIPTAK, Frantisek, inz. CSc.

Let us ensure higher technological development. Tech
praca 16 no. 4:296-298 Ap '64.

1. Gumarne 1. maja National Enterprise, Puchov.

LIPTAK, Gabor

Zirc Arboretum. Elővilág 4 no.1:23-28 Ja-Mr '59.

LIPTAK, J.; KISSOCZY, S.

A contribution to chip forming in turning operations. p. 535.
(TECHNICKA PRACA, Vol. 9, No. 8, Aug 1957, Bratislava, Czechoslovakia)

SO: Monthly List of East European Accessions (SEAL) LC, Vol. 6, No. 12, Dec 1957. Uncl.

LIPTAK, Jozef; LIPTAKOVA, Eva

Staining of wood, an important factor in surface treatment.
Drevarsky vyskum no. 1:45-58 '63.

1. Vysoka skola lesnicka a drevarska, Zvolen.

Pharmacology and Toxicology

HUNGARY

SZABO, Rezso, LIPTAK, Klara; Medical University of Szeged, II. Medical Clinic (Szegedi Orvostudományi Egyetem, II. Belklinika).

"On the Anticoagulant Effect of Atriphos."

Budapest, Kiserletes Orvostudomány, Vol XVIII, No 5, Oct 66, pages 526-530.

Abstract: [Authors' Hungarian summary] The anticoagulant effect of an ATP compound was examined. The results indicate that the conversion of prothrombin into thrombin is influenced by ATP primarily by its Ca binding. It is considered probable that the pyrophosphate segment of the molecule is responsible for the effect. The possibility is raised that ATP may play a role in the defense against susceptibility to thrombosis. 1 Hungarian, 7 Western references. [Manuscript received 17 Nov 65.]

1/1

LIPTAK, L.; SZALAI, J.

New construction methods for floors connected with rods in arched bridges. p. 308. Melyepitestudományi Szemle. Budapest. Vol. 5, no.7, July 1955.

Source: East European Accessions List, (KEAL), Lc. Vol. r, No. 2, Feb. 1956

LIPTAK, L.

Natural number of vibrations in cantilever beams having two supports.

p. 203 (Melyepitestudományi Szemle. Vol. 7, no. 5/6, May-June 1957. Budapest, Hungary)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2, February 1958

LIPTAK, L.

A technical and economic conference on economical construction. p. 289.

STAVEA. (Poverenictvo stavebnictva) Bratislava, Czechoslovakia. Vol. 6, no. 10, Oct. 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 12, Dec. 1959.

UNCL

LIPTAK, Lajos

The 2d Gliding Contest of South Dunantul. Repules 1. no.11:16 N '61.

LIPTAK, Laszlo, okleveles mernok

The highway overbridge of Tiahny. Melyepitestud szemle 12
no.11:486-491 N '62.

LIPTAK, M.

Present day potentialities and prerequisites for growth in intensity of agricultural production. p. 705.

SBORNIK. ZEMEDELSKA EKONOMIKA. Praha, Czechoslovakia. Vol. 5, no. 9, Sept. 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 9, no. 1, January 1960.

Uncl.

2/042/63/000/004/003/003

E140/E135

AUTHOR: Lipták, Neitus, Engineer, Assistant

TITLE: The use of models for investigation of additional
(skin-effect) losses

PERIODICAL: Elektrotechnický časopis, no.4, 1963, 218-227

TEXT: The article considers the use of an electrolytic tank for modeling massive industrial-frequency conductors for the determination of additional losses due to current redistribution over the cross section. It is stated that the method described here is simpler than previously obtained methods; simple enough to permit calculation in cases where other methods are laborious for practical application.

There are 8 figures and 1 table.

ASSOCIATION: Katedry elektrických strojov a prístrojov SVŠT,
Bratislava (Department of Electrical Machinery and
Instruments, SVŠT, Bratislava)

SUBMITTED: April 29, 1962

Card 1/1

LIPTAK, Naitus, inz.

Model method for investigation of additional losses, and
a note by the reviser. El tech cas 14 no.4:218-235 '63.

1. Odborný asistent Katedry elektrických strojov a prístrojov,
Slovenská vysoká škola technická, Bratislava, Mytná 32/E
(for Liptak).

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SLOVAK/4838

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Machining of Metals

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Machining of Metals

SLCVAK/4838

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LIPTAK, O.

LIPTAK, O., HAVLAR, V.

Treatment of neurocirculatory dystonia and working ability.
Bratisl. lek. listy 30:6-7, June-July 50. p. 507-13

1. Of the Second Internal Clinic of Slovak University in
Bratislava.

CLML 20, 3, March 1951

LIPTAK, O.

Balneotherapy after mitral commissurotomy. Bratisl. lek. listy
35 no.12:710-713 30 June 55.

1. Z Kúpeľného liečebného ústavu na Sliaci, primár MUDr. O. Lipták.
(MITRAL STENOSIS, surgery
commissurotomy, postop. balneother.)
(BALNEOLOGY, in various diseases
mitral stenosis, after commissurotomy)

LIPTAK, O.; TKACIK, J.; JAVORSKY, A.; NOVAK, P.; RAJCANI, J.

Primary pulmonary hypertension. Bratisl. lek. listy 44 no. 11:
688-698 D 15 '64

1. Statne sanatorium v Bratislave (riaditel - MUDr. J. Rusnak,
CSc.); a Patologickoanatomicky ustav Lekarskej fakulty Uni-
verzity Komenskeho v Bratislave (veduci - doc. MUDr. M. Brozman).

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LIPTAK, P.

Population of Honokmegy-Halom during the Avar period. p. 27.
(ANTHROPOLOGIAI KOZLEMENYEK. Vol. 4, no. 2, 1956, Hungary)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, no. 2, Dec. 1957.
Uncl.

LIPTAK, P.

Present-day anthropology in Poland. p. 57.

ANTHROPOLOGIAI KÖZLEMÉNYEK. (Magyar Biológiai Társaság. Anthropologiai Szakosztály) Budapest, Hungary.. Vol. 2, no. 1/2, 1958.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, no. 7, July 1959
Uncl.

LIPTAK, TAMAS

Mathematical Reviews
Vol. 15 No. 3
March 1954
Analysis

7-8-54
✓

Juvarcz, Iténeusz, et Lipták, Tamás. Sur quelques problèmes de l'application médico-biologique de la statistique mathématique. *Mat. Akad. Alkalm. Mat. Közl.* 1 (1953), 17-22 (1953). (Hungarian. Russian and French summaries.)

Consider a random variable with continuous distribution function and take $2n$ independent observations forming two samples of size n . Denote by $S_n(x)$ respectively $T_n(x)$ the empirical distributions determined by the first and second sample. Let

$$D_n^+ = \sup_x [S_n(x) - T_n(x)] \quad D_n^- = \sup_x [T_n(x) - S_n(x)]$$

and

$$D_n = \sup_x |S_n(x) - T_n(x)| = \max(D_n^+, D_n^-).$$

Gnedenko and Korolyuk [Doklady Akad. Nauk SSSR (N.S.) 69, 525-528 (1951); these Rev. 13, 570] gave the exact distribution of the statistic D_n and Gnedenko and

LIPTAK, T.

On the combination of independent tests. In English. p. 171

MAGYAR TUDOMANYOS AKADEMIA MATEMATIKAI KUTATO INTÉZETÉNEK KOZLEMENYEI.
PUBLICATIONS OF THE MATHEMATICAL INSTITUTE OF THE HUNGARIAN ACADEMY OF
SCIENCES. Budapest, Hungary. Vol. 3, no. 3/4, 1958

Monthly list of East European Accessions (EEAI). LC. Vol. 9, no. 1, Jan.,
1960

Uncl.

KORNAI, Janos; LIPTAK, Tamas

Two-level planning: a model of the theory of games and
iterative computing method to be used in the national economy
for solving long-range plans. Mat kut kozl MTA 7 Series
B no.4:577-621 '62[publ. '63].

LIPTAK, V.

"International experiment area for the growing of larch trees at Podbansko."
Discussion of the fight against the spruce bark beetle. p. 305

p. 303 (Les) Vol. 12, no. 7/8, July/Aug. 1956
Prague, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

L 64733-65 ENT(m) DINAP
ACCESSION NR: AP5019213

UR/0056/65/0 9/001/0060/0084

AUTHOR: Urbanets, Ya.; Vrzal, Ya.; Liptak, Ya.

TITLE: Investigation of the intensities of hard γ transitions in the capture of resonance neutrons by Ba^{135}

Journal eksperimental'noy i teoreticheskoy fiziki. v. 49, no. 1, 1977, pp. 64

TOPIC TAGS: Gamma transition, barium, Gamma spectrum, neutron capture, Gamma neutron reaction

ABSTRACT: A single-crystal scintillation spectrometer and a three-dimensional analyzer were used to measure the spectra of hard γ quanta emitted when resonant neutrons are captured by Ba^{135} at neutron energies 18--1500 eV. The procedure was described for the most part in an earlier paper by one of the authors (Urbanets, ZhETF v. 45, 93, 1963). The measurements were carried out with the IER reactor of OIYAI (Joint Institute of Nuclear Research), using an improved multi-dimensional analyzer with magnetic tape for the recording of the three-dimensional spectrum. The samples used had cross section areas 120 and 240 cm^2 and consisted of powdered barium oxide. The measurements covered the γ range from 4 MeV to the neutron binding energy (9.23 MeV). Plots are presented of the time spectra for different

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L 64733-65

ACCESSION NR: AP501921B

18
 γ-ray energies and for the renormalized amplitude spectra for several resonances of Ba¹³⁵. The 24.5-eV resonance exhibits a noticeable anomaly in the intensities of the transitions to the ground and first excited level, which are determined for eleven resonances of Ba¹³⁵; the results are tabulated. Several possible explanations for the observed anomaly in the 24.5-eV resonance are proposed. "The authors thank V. L. Shapiro for interest in the work and valuable discussions, G. P. Zhukov and V. G. Tishin for adjusting the analyzer, Ya. Gornik for help with the measurements, and L. R. Pike and his co-workers for reporting some experimental data." Orig. art. has 3 figures, 3 formulas, and one table.

ASSOCIATION: Ob'yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: 29Jan65

ENCL: 00

SUB CODE: KP

NR REF SOV: 003

OTHER: 003

Card 2/2

L 09236-67 EMT(m)/EMP(t)/ETI IJP(c) JD/JG
ACC NR: AP7002793

SOURCE CODE: UR/0048/66/030/008/1260/1264

AUTHOR: Arutyunyan, E. A.; Vazal, Ya.; Dzhelepov, B. S.; Liptak, Ya.; Urbanets, Ya.; Khol'mov, Yu. V.

ORG: none

TITLE: Gamma ray spectrum of Nd sup 147

SOURCE: AN SSSR. Izvestiya, Seriya fizicheskaya, v. 30, no. 8, 1966, 1260-1264

TOPIC TAGS: gamma spectrum, pulse analyzer, gamma spectrometer

ABSTRACT: The γ -ray spectrum of Nd¹⁴⁷ was investigated with the aid of a Ge(Li)-detector built in the Prague Institute of Solid-State Physics. The spectrum was recorded by means of 2048- and 512-channel pulse analyzers. The Nd¹⁴⁷ source was obtained from enriched Nd¹⁴⁶ with the aid of the reaction Nd¹⁴⁶(n γ)Nd¹⁴⁷. Four series of measurements with an average exposure time of 3 hr were carried out. Findings: The intensities of all γ -lines decrease in time with a period equal to the half-life of Nd¹⁴⁷. The recorded intensities and energies of the γ -rays of Nd¹⁴⁷ were tabulated and compared with the E_{γ} and I_{γ} obtained by means of a magnetic γ -spectrometer, a scintillation spectrometer, and a β -spectrometer of the $\pi/2$ type. Peaks corresponding to β -transitions at 542, 590, 610, 622 kev could be plotted for the first time. The presence of 310-kev γ -rays corresponding to the transition 720 $\rightarrow$ 410 kev, which was observed by Gunye et al. (Saraf. Phys. Rev., 124,

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0925-1678

L 09236-67
ACC NR: AP7002793

172 (1961)), could not be confirmed (the intensity of the corresponding quanta was below 0.2 of the intensity of the transition $E\gamma = 531$ kev): "The authors are indebted to L. N. Moskvina for chemical purification of the preparation ^{147}Nd source/ and to T. I. Sidorova for assistance in analyzing the findings." Orig. art. has: 3 figures and 1 table. [JPRS: 39,040]

SUB CODE: 20 / SUBM DATE: none / ORIG REF: 001 / OTH REF: 002

L 09229-67 ENT(m)/ENT(t)/ETI IJP(c) JD/JG
 ACC NR: A27002792 SOURCE CODE: UR/0048/66/030/000/1253/1259

AUTHOR: Arutyunyan, E. A.; Vrzal, Ya.; Dzhelezov, B. S.; Liptak, Ya.; Urbanets, Ya.; Khol'mov, Yu. V.

ORG: none

TITLE: Gamma ray spectrum of Ce sup 143

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 8, 1966, 1253-1259

TOPIC TAGS: gamma radiation, gamma spectrum, radioactive decay, radioisotope, cesium

ABSTRACT: The γ -radiation of Ce^{143} was investigated with the aid of a $\text{Ce}(\text{Li})$ -spectrometer. Detector characteristics: depth of sensitive layer 6 mm; working volume, 5 cm^3 ; half-width of the γ -lines of Co^{60} , 4 kev. The source was prepared by the (n) reaction of a specimen of Ce^{142} enriched to 89.7%. The γ -spectrum was measured over the energy range of up to 2000 kev with the aid of 512- and 2048-channel pulse analyzers, the average exposure time being three hours. The values obtained for the energies and relative intensities of the γ -rays of Ce^{143} are tabulated. Twenty-six γ -lines were obtained. The finds are generally in agreement with the findings of other investigators. Major difference in intensities are observed for the transitions with energies of 372, 587, 795, (triple line), and 936 kev, however. The transitions $E = 392, 500, 556, 804, 1000, 1029, 1044, 1058, 1325$ kev do not fit in the scheme of Pr^{143} proposed by Gopinathan et al. (Phys.

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L 09229-67

ACC NR: AP7002792

Rev., 136, 1247 (1964)) (measurements with scintillation spectrometers). The scheme of the decay of Co^{143} will be discussed later. "The authors are indebted to L. N. Moskvina for chemical purification of the preparation and to T. I. Sidorova for assistance in analyzing the findings." Orig. art. has: 4 figures and 1 table.
[JPRS: 39,040]

SUB CODE: 20,18 / SUBM DATE: none / ORIG REF: 002 / OTH REF: 002

Card 2/2

LIPTAK, Jozef; LIPTAKOVA, Eva

Staining of wood, an important factor in surface treatment.
Drevarsky vyskum no. 1:45-58 '63.

1. Vysoka skola lesnicka a drevarska, Zvolen.

BRUTOVSKY, Milan, inz.; ZADUBAN, Milan, inz.; BANAS, Julius, inz.;
LIPTAKOVA, Gizela, pron. biol.

Contribution to the determination of ^{131}J by means of the
extraction method. Chem zvesti 19 no.6:470-474 '65.

1. Radiobiological Division of the Institute of Experimental
Biologie of the Slovak Academy of Sciences, Kosice, Kuzmanyho
12 (for Brutovsky, Zaduban and Banas). 2. Chair of Biology
of the Pavol Jozsef Safarik, Kosice, Kuzmanyho 12 (for
Liptakova). Submitted September 28, 1964.

Radiobiology

CZECHOSLOVAKIA

ZADUBAN, Milan; BRUTOVSKY, Milan; LIPTAKOVA, Gizela; VINKLEROVA, Olga; Department of Radiobiology, Institute of Experimental Biology, Slovak Academy of Sciences, and Chair of Biology, Faculty of Natural Sciences, P.J. Safarik University (Oddelenie Radiobiologie Ustavu Experimentalnej Biologie Slovenskej Akademie Vied a Katedra Biologie Prirodovedeckej Fakulty Univerzity Pavla Jozefa Safarika), Kosice.

"Determination of Radioactive Iodine in Plants."

Bratislava, Biologia, Vol 21, No 8, 1966, pp 578 - 588

Abstract: The authors describe a method of measuring the activity of I^{131} in plant materials either directly or after chemical treatment. I^{131} is detected by means of scintillation detectors using beta or gamma radiation. When I^{131} is the only radioactive element present, chemical treatment of the sample is not needed; when other active elements are present, it may be determined spectrometrically or after a chemical treatment. I^{131} is extracted from plant materials by NaOH at 100°C ; the extraction can be improved by ultrasonic devices. Separation-concentration methods recommended are: extraction-precipitation; ion exchange by a solid and liquid anion exchanger; chemical sorption. 7 Figures, 3 Tables, 3 1/1 Western, 5 Czech, 2 Russian references. (Ms. rec. 5 Nov 65).

ERDEY, L., prof. (Budapest XI., Gellert ter 4); LIPTAY, G. (Budapest XI., Gellert ter 4); GAL, S. (Budapest XI., Gellert ter 4); PAULIK, R. (Budapest XI., Gellert ter 4)

Derivatographic investigation of ammonium phosphate precipitations.
Periodica polytechn chem 5 no.3:209-217 '61.

1. Lehrstuhl für Allgemeine Chemie, Technische Universität.

ERDEY, L., prof. (Budapest XI., Gellert ter 4); LIPTAY, G. (Budapest XI., Gellert ter 4); GAL, S. (Budapest XI., Gellert ter 4); PAULIK, F. (Budapest XI., Gellert ter 4)

Thermal investigation of iron (III) hydroxy precipitations.
Periodica polytechn chem 5 no.4:287-303 '61.

1. Lehrstuhl für Allgemeine Chemie, Technische Universität,
Budapest. 2. Editorial Board member, "Periodica Polytechnica;
Chemical Engineering" (for Erdey).

GAL, S. (Budapest), XI., Gellert ter 4); LIPTAY, G. (Budapest, XI., Gellert ter 4); RISTICI, J. (Budapest, XI., Gellert ter 4)

Derivatographic determination of water content in cadmium thiobarbiturate. Periodica polytechn chem 7 no.1:21-26 '63.

1. Institut für organisch-chemische Technologie der Technischen Universität, Timisoara (for Ristici). 2. Lehrstuhl für Allgemeine Chemie, Technische Universität, Budapest (for Gal and Liptay). Vorgelegt von Prof. Dr. L. Erdey.

ERDEY, L., prof., dr. (Budapest, XI., Gellert ter 4); LIPTAY,
G. (Budapest, XI., Gellert ter 4); PAULIK, F. (Budapest,
XI., Gellert ter 4);

Determination of clacite, magnesite and dolomite in
presence of each other by means of a derivatograph.
Periodica polytechnica chem 7 no. 3: 177-184 '63

1. Lehrstuhl für Allgemeine Chemie, Technische Universität,
Budapest.
2. Mitglied, Redaktionskollegium, "Periodica Polytechnica-
Chemical Engineering". (for Erdey).

ERDEY, L., prof. (Budapest, XI., Gellert ter 4); LIPTAY, G.
(Budapest, XI., Gellert ter 4);

Derivatographic investigation of metal anthranilate pre-
cipitates. Periodica polytechn chem 7 no. 3: 185-204 '63

1. Lehrstuhl fur Allgemeine Chemie, Technische Universitat,
Budapest.
2. Mitglied, Redaktionskollegium, "Periodica Polytechnica-
Chemical Engineering" (for Erdey).

ERDEY, L., prof. (Budapest, XI., Gellert ter 4); LIPTAY, G.
(Budapest, XI., Gellert ter 4)

Derivatographic study of metal pyridine rhodanide precipitates. Periodica polytechn chem 7 no. 3: 223-236 '63

1. Department for General Chemistry, Polytechnical University of Budapest.
2. Editorial board member, "Periodica Polytechnica-Chemical Engineering" (for Erdey).

LIPTAY, Gyorgy, dr. (Budapest, XI., Gellert ter 4); BIRO, Odette (Budapest, XI., Gellert ter 4); SZOLLOSI, Istvan, dr. (Budapest, XI., Gellert ter 4)

Examination of thermal properties of thermoreactive plastics.
Periodica polytechn chem 8 no.3:191-195 '64.

1. Kafedra obshchey khimii i Kafedra plastmassovoy i rezinovoy
promyshlennosti Budapeshtskogo politicheskogo instituta, Budapesht.
Submitted February 10, 1964.

ERDEY, Laszlo, prof. dr. (Budapest, XI., Gellert ter 4); LIPTAY, Gyergy, dr.
(Budapest, XI., Gellert ter 4); DAVID, Pate~ (Budapest, II., Lovohaz u.39)

Derivatographic study of thermal decomposition of electrical insulating materials and insulators. Periodica polytechn electr 8 no. 3:242-250 '64.

1. Department for General Chemistry of the Polytechnical University, Budapest, and Research Institute for Electrical Industry, Budapest.
2. Editorial Board Member, "Periodica Polytechnica - Electrical Engineering" (for Erdey). Submitted February 10, 1964.

TAMAS, Ferenc, dr.; LIPTAY, Gyorgy

Investigating the hydration of cement from Tatabanya.
Epitoanyag 14 no.8:281-287 Ag '62.

1. Epitoanyagipari Kozponti Kutato Intezet (for Tamas).
2. Budapesti Műszaki Egyetem Általános Kémiai Tanszék (for Liptay).

DEVENYI, Miklos; KASA, Imre; LIPTAY, Gyorgy

A new plane method for the quick determination of the oxide and humidity content of metal powders. *Magy kem lap* 18 no.6:291-292 Jo 163.

1. Keményfémipari Vállalat (for Devenyi). 2. Budapesti Műszaki Egyetem Általános Kémiai Tanszék (for Kasa and Liptay).

L 1179-66

ACCESSION NR: AT5025201

HU/2502/64/042/004/0379/0382

AUTHOR: Liptay, György (Doctor)(Budapest); Hegyaljai Kiss, Geza (Doctor)(Budapest);
Erdey, Laszlo (Professor, Doctor)(Budapest).

TITLE: Investigation by thermal analysis of the pyrolytic dehydrogenation of sterols

SOURCE: Academia scientiarum hungaricae. Acta chimica, v. 42, no. 4, 1964, 379-382

TOPIC TAGS: thermal analysis, pyrolysis, dehydrogenation, alcohol

Abstract: [English article] The pyrolytic decomposition of $\Delta^1,4$ -androsta-
diene-3,17-dione and of $\Delta^1,4,6$ -androstratriene-3,17-dione was investiga-
ted by thermal analysis employing the Orion GYEM 676 type derivatograph.
The curves obtained indicated that the splitting temperature of the angular
methyl group is not affected by the presence of the unsaturated B-ring and
the first-mentioned compound pyrolyzed at a higher exothermic rate.
Orig. art. has 4 formulas and 2 figures.

ASSOCIATION: Department of General Chemistry, Technical University, Budapest;
Chinoin Factory of Pharmaceutical and Chemical Products, Budapest

SUBMITTED: 12 May 64

ENCL: 00

SUB CODE: OC, GC

NO REF SOV: 000

OTHER: 008

JPRS

Card 1/1

LIPTAY, Gyorgy, dr okleveles vegyeszmernok, adjunktus; DAVID, Peter, okleveles vegyész; ERDEY, Laszlo, dr., okleveles vegyész, akadémikus

Derivatographic analysis of the heat caused decomposition of electric insulators and insulations. Pt.1. Elektrotechnika 57 no.9:392-397 S '64.

1. Chair of General Chemistry, Budapest Technical University, Budapest XI., Gellert ter 3 (for Liptay). 2. Research Institute of Electric Industry, Budapest, VI., Népkoztársasag utja 32 (for David). 3. Head, Chair of General Chemistry, Budapest Technical University, Budapest XI., Gellert ter 3 (for Erdey).

LIPTAY, G.

✓ Derivatographic study of potassium hydrogen phthalate.
R. Bejcek, L. Erdey, F. Paulik, and G. Liptay (Tech.
Univ. Budapest, Hung.). *Talanta* 3, 53-57 (1956). Deriva-
tographic measurements showed that the decompn. of $C_8H_5-
COOHCOOK$, which is often used as a primary standard,
begins at 190-200°. The nonhygroscopic prepn. can be
dried at 100-150°. Decompn. proceeds in 3 steps, the rate
depending on the rate of increase of temp. $C_8H_5(COOK)_2$ is
formed first, phthalic anhydride and water being removed.
Enthalpy changes also can be obtained from the derivato-
grams; this yields information on the further mechanism of
thermal decompn. and changes of state of the sample.

Hella L. Rosenfeld

6
JAT(NB)

GALFI, Janos; LIPTAY, Istvan; STEGENA, Lajos; GELLERT, Ferenc; KOVACS, Judit;
SEDY, Lorand

Pressure gauge for seismic surveying. Geofiz kozl 3 no.1/11:143-156
'54.

L 31790-66 EWT(m)/EWP(j) WW/RM

ACC NR: AP6021675

SOURCE CODE: UR/0079/66/036/003/0461/0467

AUTHOR: Dorkach, G. I.; Liptuga, N. I.

ORG: Institute of Organic Chemistry, AN UkrSSR (Institut organicheskoy khimii
(AN UkrSSR)

36
35
B

TITLE: Derivatives of N-phosphorylated iminocarboxylic acids 1

SOURCE: Zhurnal obshchey khimii, v. 36, no. 3, 1966, 461-467

TOPIC TAGS: nonmetallic organic derivative, organic phosphorus compound, carboxylic acid chloride, chemical synthesis, imine compound, hydrolysis, formic acid

ABSTRACT: N-Phosphonoiminocarboxylic acid dichlorides were prepared by the chlorination of isothiocyanates of dialkyl- and diaryl-phosphoric acids. Dichlorides of N-phosphonoiminocarboxylic acids react with sodium alcoholates, phenolates, mercaptides, and thiophenolates, as well as aliphatic and aromatic amines to yield diesters, dithioesters, and diamides of N-phosphonoiminocarboxylic acids. In the reaction of N-phosphonoiminocarboxylic acid dichlorides with two moles of an aromatic amine, N-phosphono-N'-aryl-C-chloroformamidines are formed, which react with triethylamine to give N-phosphono-N'-arylcarbodiimides. Hydrolysis of N-dialkylphosphono-N'-arylcarbodiimides yields N-phosphono-N'-arylureas. The action of phosphorus pentachloride on N-dialkylphosphonoiminocarboxylic acid dichlorides produces N-dichloro-

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UDC: 661.718.1

L 51790-66

ACC NR: AP6021675

phosphoryliminophosgene. Diesters of isocyanatophosphoric acid were prepared by formolysis of N-phosphonoiminocarboxylic acid dichlorides with anhydrous formic acid. Hydrolysis of N-phosphonoguanidines (prepared from N-phosphono-N'-aryl-C-chloroformamidines and amines) in dilute acid solutions results in the formation of dialkyl phosphates and guanidines. N-Phosphonoiminocarboxylic acid dichloride react vigorously with potassium salts of diesters of dithiophosphoric acids, but only diesters of isocyanatophosphoric acid could be isolated from the reaction products. Orig. art. has: 1 table. [JPRS]

SUB CODE: 07 / SUBM DATE: 18Jan65 / ORIG REF: 009 / OTH REF: 003

LS

Card 2/2

ZVYAGINTSEV, A.F.; IVANOV, Yu.N.; KAZAKOV, V.E.; STETSENKO, A.M.;
SCLOMOVICH, M.Ya.; KORZH, V.I.; DASHKEVICH, A.A.; Primali
uchastiye: LIPTSEN, S.Kh.; RYZHIKOV, A.P.; STAL'NOKRITSKIY,
V.N.; LEVENETS, L.Ye.; MOGILA, V.A.; KOVAL', A.A.; VLASOV, V.F.;
ROSHCHIN, A.G.; RAYKO, V.P.; KORNIYENKO, V.G.; PANTYUSHKIN, N.V.

Investigating the possibility of manufacturing all-rolled
electric locomotive wheels with existing equipment. Kuz.-shtam.
proizv. 5 no.11:11-14 N '63.

(MIRA 17:1)

LIPTSER, R.Sh.; SHIRYAYEV, A.N. (Moscow)

A Bayes problem of sequential search in diffusion approximation.
Teor. veroiat. i ee prim. 10 no.1:192-199 '65.

(MIRA 18:3)

I. 14651-66 EWT(d) IJP(c)
ACC NR: AP6004252

SOURCE CODE: UR/0378/65/000/006/0081/0084

AUTHOR: Liptser, R. Sh.

ORG: none

TITLE: Equation for a Wiener process on the basis of incomplete data

SOURCE: Kibernetika, no. 6, 1965, 81-84

TOPIC TAGS: probability theory, stochastic process, white noise, differential equation

ABSTRACT: The author derives an equation for a diffusion process which takes place against a background of "white noise". The controlled process is given by the stochastic differential equation

$$dx_t = u_t dt + \sigma_t d\xi_t,$$

where x_0 is a Gaussian random quantity with parameters (m, σ^2) , ξ_t is a Wiener process, $M\Delta\xi_t = 0$, $M(\Delta\xi_t)^2 = \Delta t$, u_t is the control function, $|u_t| \leq 1$. The observed process is given by the equation

$$dy_t = x_t dt + \sigma_t d\eta_t,$$

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UNC: 519.27

L 14651-66
ACC NR: AP6004252

where η_t is a Wiener process, $M\Delta\eta_t = 0$, $M(\Delta\eta_t)^2 = \Delta t$. Processes ξ_t and η_t are independent. An expression is found for optimum control which depends only on a *posteriori* density. In conclusion the author is grateful to A. N. Shiyayev for constant interest in this work. Orig. art. has: 16 formulas.

SUB CODE: 12/ SUBM DATE: 01Jun65/ ORIG REF: 004/ OTH REF: 001

Card 2/2 *SC*

L 9291-66 EWT(1)/EWA(h)

ACC NR: AP5028032

SOURCE CODE: UR/0119/65/000/011/010/020

AUTHOR: Il'in, Yu. S. (Engr.); Kabalevskiy, A. N. (Engr.); Liptser, R. Sh. (Engr.)

ORG: none

TITLE: Broadband operational amplifier 25

SOURCE: Pribozostroyeniye, no. 11, 1965, 18-20

TOPIC TAGS: dc amplifier, operational amplifier, *band pass amplifier, electron tube, analog computer, computer component*

ABSTRACT: The development of a new broadband low-drift electron-tube operational d-c amplifier is briefly reported. The first 6F1P-tube stage has two inputs (triode and pentode control grids) and is coupled via a 6N3P-tube cathode follower to the second 6F1P-tube stage. The amplifier d-c gain is about 3000; it is designed for a 10-kohm load. Addition of a two-6P14P-tube output stage reduces the required load resistance to 2.5 kohms. These characteristics are reported: passband, 2.3 Mc (at 0.7 level); linearity, ± 100 v. The same fundamental circuit was used for designing another operational amplifier intended for a high-speed analog computer with periodic solutions; its passband was 300 kc (at 0.7 level). Orig. art. has: 5 figures and 3 formulas. [03]

Card 1/1

UDC: 621.375.4

L 9291-66

ACC NR: AP5028032

SUB CODE: 09/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 001/ ATD PRESS: 4153

CC
Card 2/2

L 43647-66 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l) BC

ACC NR: AP6011289

SOURCE CODE: UR/0378/66/000/001/0083/0086

AUTHOR: Liptser, R. Sh.

ORG: none

TITLE: On the maximization of fiducial probability with incomplete data

SOURCE: Kibernetika, no. 1, 1986, 83-86

TOPIC TAGS: Stochastic process, optimal control theory

ABSTRACT: At moments $\Delta, 2\Delta, \dots, k\Delta, \dots, N\Delta$ random quantities $\eta_{\Delta}, \eta_{2\Delta}, \dots, \eta_{N\Delta}$ are observed such that

$$\Delta\eta_{k\Delta} = \Theta\Delta + \Delta\xi_{k\Delta}.$$

It is necessary to find a sequence of nested intervals

$$(x_{k\Delta}, x_{k\Delta} + l(k\Delta)) \supseteq (x_{(k+1)\Delta}, x_{(k+1)\Delta} + l((k+1)\Delta)) + l((k+1)\Delta)),$$

so as to maximize the probability $P\{\Theta \in (x_{N\Delta}, x_{N\Delta} + l(N\Delta))\}$,

where $l(t)$ is a smooth time function. The problem is solved with the aid of a theorem specifying the optimal control function as sought in a class of Markov functions, while the risk function is, among other conditions, a smooth function. The author

UDC: 519.21

Card 1/2

L 43647-66

ACC NR: AP6011289

thanks I. V. Romanovskiy and A. N. Shiryayev for posing the problem. Orig. art. has:
32 formulas.

SUB CODE: 12/3/

SUBM DATE: 03Jul65/

ORIG REF: 002/

OTH REF: 001

LS

Card 2/2

L 43709-66 EWT(d)/EW(v)/EWP(k)/EWP(h)/EWP(l) IJP(c) BC
 ACC NR: AP6023669 SOURCE CODE: UR/0103/66/000/004/0142/0150 78

AUTHOR: Dashevskiy, M. L. (Moscow); Liptser, R. Sh. (Moscow)

ORG: none

TITLE: Simulation of stochastic differential equations connected with the problem of "disharmony" on an analog computer

SOURCE: Avtomatika i telemekhanika, no. 4, 1966, 142-150

TOPIC TAGS: random noise signal, analog computer, computer application, stochastic process, signal detection, signal noise separation

ABSTRACT: The article deals with the problem of signal detection against a background of noise and the problem of control on the basis of incomplete data. A proper device for the realization of the linear and nonlinear stochastic differential equations, to which this problem has been largely reduced in recent times, might be a continuous-acting analog computer operating in real time and receiving a signal-noise mixture. The difficulties of a purely mathematical nature which are encountered in the simulation of such equations are pointed out and methods for their elimination suggested. Methods for the simulation of controlled diffusion-type Markovian processes are proposed, and the results of the simulation of a random process

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UDC: 621.391.161:661.142.33

L 43709-66

ACC NR: AP6023669

involving the "disharmony" problem are discussed. A process η_t , which is the sum of the useful signal and "white" Gaussian noise, is observed. The useful signal is a Markovian process with two states 0 and 1, for which a transition is possible at a random moment of time θ only from state 0 to state 1; i.e., the random process satisfies the stochastic differential equation

$$d\eta_t = \chi(t - \theta)dt + d\xi_t,$$

where

$$\chi(t - \theta) = \begin{cases} 0, & t < \theta, \\ 1, & t \geq \theta, \end{cases}$$

ξ_t is the Wiener process, $M\Delta\xi_t = 0$, $D\Delta\xi_t = \Delta t$.

In addition, it is known that the random quantity θ has the following a priori distribution

$$P(\theta > t | \theta > 0) = e^{-\lambda t}, \quad P(\theta = 0) = \pi.$$

Here π and λ are known constants.

The problem is to establish, for a given probability of false alarm $\omega = P(v < \theta)$ (v is the moment at which the alarm signal is activated) and within a mean-minimal time, the fact of a transition by the useful signal from 0 to 1; i.e., to minimize the mathematical expectancy

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ACC NR: AP6023669

$$\tau = M(v - 0 | v \geq 0).$$

A basic expression for the simulation is derived and a schematic for its realization is presented, along with a table summarizing the simulation results for 100 trajectories under different conditions. It is shown that, by virtue of their high operational speed, analog computers can expand considerably the possibility of the practical use of statistical methods for signal detection against a background of noise. The accuracy of the results obtained in this manner will be of the same order as in the integration of ordinary differential equations. The authors express their gratitude to A. N. Shirayev for his formulation of the problem and discussion of the results. Orig. art. has: 30 formulas, 3 figures, and 1 table.

SUB CODE: 09/ SUBM DATE: 18Sep65/ ORIG REF: 004/ OTH REF: 001

Card 3/3

L 40242-66 E-T(d)/E-T(1)/E-T(v)/E-T(k)/E-T(h)/E-T(1) Bu

ACC NR: AP6021399

SOURCE CODE: UR/0103/66/000/006/0171/0177

AUTHOR: Kabalevskiy, A. N. (Moscow); Liptser, R. Sh. (Moscow)

ORG: none

TITLE: The design of a random-function generator for the simulation of Markov diffusion processes on analog computers

SOURCE: Avtomatika i telemekhanika, no. 6, 1966, 171-177

TOPIC TAGS: optimal automatic control, Markov process, analog computer, probability, stochastic process, random process

ABSTRACT: The time required for the use of the Monte-Carlo method, frequently employed for the solution of the linear and nonlinear partial derivative equations in statistical control problems, can be significantly reduced by integrating the stochastic differential equations on high-speed analog computers with a repetition of the solutions. This requires the incorporation of random-function generators in the computer. The present authors consider certain problems which arise in the design of such "white noise" generators as employed for the simulation of Markov diffusion processes on computers. Thyatron generators in particular are analyzed from this point of view. The random-function generator described was used in the

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solution of several partial-derivative equations on analog computers with periodization of the solutions by the Monte-Carlo method. Satisfactory results were obtained (e.g. maximum errors of not more than 1.5%, for a sampling of 10,000, in the solution of the initial and of several boundary problems in a homogenous heat-conduction equation with constant factors). In conclusion, the authors express their gratitude to Ya. A. Kogan for the many useful suggestions made during his reading of the manuscript. Orig. art. has: 3 figures and 12 formulas.

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